

## **REMARKS**

This Amendment is in response to the final Office action (Paper No. 20070322) mailed on 10 April 2007. Reexamination and reconsideration are respectfully requested.

### **Listing of The Claims**

Pursuant to 37 CFR §121(c), the claim listing, including the text of the claims, will serve to replace all prior versions of the claims, in the application.

### **Status of The Claims**

Claims 7 through 11 and 13 through 17 are pending in this application.

### **Amendment of The Claims**

Claims 1 through 6, 12 and 18 are cancelled.

### **Issues raised by Paper No. 20070322**

#### **I. Drawings**

Paper No. 20070322 required submission of drawings with Figures 6 through 8 labeled as *Prior Art* on grounds that “only that which is old is illustrated.” Applicant has earlier petitioned from this requirement. “Old” is not a proper characteristic of “prior art” under any paragraph of 35 U.S.C. §102. Specifically, the requirement is improper; nothing in 35 U.S.C. §102 declares “that which is old” is “prior art.” Withdrawal of this requirement is therefore respectfully requested.

#### **II. Abstract Objection**

On page 2, paragraph 4 of Paper No. 20070322, the Examiner stated that “the abstract of the disclosure is objected to because Applicant recites that ‘micro-patterns preferably have a cross sectional area of 150  $\mu\text{m}$ ’. Paper No. 20070322 however, states that micrometers is not a proper unit

of measure for designating area. Correction is required”.

The Examiner’s thorough examination is highly appreciated. Accordingly, the abstract, is amended to read:

“The micro-patterns preferably have a cross sectional **length** of 150  $\mu\text{m}$ .”

This amendment is in accordance with the priority documents (KR 10-2003-0018745). According to an extremely reputable resource, claim 5 of the priority documents can be translated into:

“The helical implant of in claim 2 or 4, wherein the recess es have a cross sectional length of 150  $\mu\text{m}$ .”

Therefore, no new matter is raised under 35 U.S.C. §132.

In addition, because the micro-patterns are formed consecutively along the flank of the thread, the cross-sectional length in the abstract indicates the “pitch”, that is, the distance between two adjacent recesses (or two adjacent protrusions).

## **II. Claim Rejections - 35 U.S.C. §112**

**Rejection of Claims 7-18 under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement.**

Claims 7-18 are rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement.

Regarding claims 7-18, on page 3, paragraph 5 on Paper No. 20070322, the Examiner stated:

“the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art

that the inventors, at the time the application was filed, had possession of the claimed invention. Applicant has added new limitations to claims 7 and 13 directed to 'inclined flanks of said thread.' For the purpose of examination, as best understood based on Applicant's original specification, Examiner will interpret said 'flanks' to be the same as the 'thread inclines' of claim 1".

Respectfully, "flank" is an art recognized term well known to a person of ordinary skill in the art; in point of fact, "flank" is unique in its use in this art, and there is no other. The noun "flank" designates the straight sides that connect the crest which is prominent part of the thread, and the root which is the bottom of the thread, as expressly illustrated by the drawing in "The Basic Thread Terms" (<http://www.boltscience.com/pages/screw3.htm>). As admitted by the Examiner, the "inclined flanks of the threads" is an alternative term to refer to the "thread inclines" in claim 1 as well as in the original specification.

Moreover, the Examiner's attention is invited to note that "The Basic Thread Terms" (<http://www.boltscience.com/pages/screw3.htm>) was submitted as the Information Disclosure Statement on 4<sup>th</sup> January 2007 and was initialed by the Examiner. In addition, the Examiner stated in paper No. 20070322 that "the information disclosure statement is being considered by the examiner"<sup>1</sup>.

Paper No. 20070322 erroneously asserts that "the claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicant's written specification, as demonstrated by the written Figures 1 through 4, clearly illustrated "flanks." Moreover, that "flanks" is an art recognized term as illustrated by Applicant's

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<sup>1</sup> Paper No. 20070322, page 2, paragraph 2.

original Figures 1 through 4, is demonstrated its use in the drawings and detailed descriptions of such well known references as *Locking Thread Construction* by Horace D. Holmes, U.S. Patent No. 4,076,064 issued on the 28<sup>th</sup> of February 1978, and *Screw With Two Types Of Threads* by Pei-Hua Chen, U.S. Patent No. 7,163,366 on the 16<sup>th</sup> of January 2007. In excess of two hundred and seventy-five other recent U.S. Patent issues demonstrate comparable uses of the term “flank.” Therefore, the evidence of record convincing establishes that inventors had possession of the claimed invention with “inclined flanks of the threads. Applicant notes with appreciation, the Examiner’s accurate reading of the amended claims in conformance with the art recognized nomenclature illustrated by FIGS. 1-4, and respectfully requests the Examiner to withdraw this rejection of claims 7 through 18.

### **III. Claim Rejections - 35 U.S.C. §102**

**Rejection of Claims 7-10 and 13-16 under 35 U.S.C. §102(b) as being anticipated by Hansson et al. (U.S. 5,588,838).**

Claims 7-10 and 13-16 are rejected under 35 U.S.C. §102(b) as being anticipated by Hansson et al. (U.S. 5,588,838).

Regarding claims 7 and 13, on page 4, paragraph 8 of Paper No. 20070322, the Examiner stated:

“Hansson discloses a helical implant with a core surrounded by helical threads (i.e. Figure 3), wherein the threads have continuous micro-patterns (i.e. 109) which increase the exposed surface of the implant”.

According to MPEP §2131, in the Office:

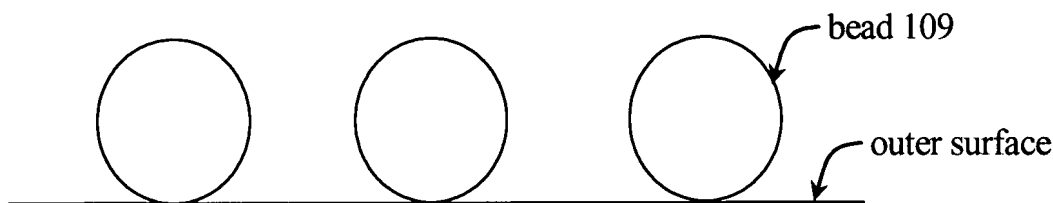
“A claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).”

Applicant respectfully, Hansson ‘838 fails to teach that the **inclined flanks** of the helical threads are formed with micro-patterns.

**First**, Applicant notes that there are no inclined flanks in any aspect of the embodiment as shown in FIG. 3 of Hansson ‘838 as cited by the Examiner. The circumferentially oriented beads 109 are directly formed on the outer surface of the upper portion 110; in more precise language, circumferentially oriented beads 109 are directly formed on the outer surface of the upper portion 110 of the core. See the cited passages of Hansson ‘838, (column 3, lines 17-21), which states that:

“the conical outer surface of the upper portion 110 of the fixture 101 has circumferentially oriented beads 109. The beads may have a height, spacing, and orientation similar to that of the microthreads 9 described in connection with FIGS. 1-2”.

Therefore, the vertical sectional view of the upper portion 109 would show a plurality of spheres formed on the conically outer surface, as shown in the following Figure 1.



**Figure 1** Vertical sectional view of the upper portion 109 in FIG. 3 of Hansson ‘838.

By definition in the art, the “flank” of a thread is the straight side that connects the crest which is prominent part of the thread, and the root which is the bottom of the thread. Comparing Figure 1 with the vertical sectional views of the helical implant as shown in FIGS. 1-4 of the present application demonstrates that Hansson ‘838 fails to either teach or suggest that the inclined flanks of the threads having continuous micro-patterns in claims 7 and 13.

**Second**, all of the claims rejected actually define, *inter alia*, a unitary structure with “a core surrounded by helical threads, and inclined flanks of said threads bearing continuous micro-patterns increasing exposed surface area of said implant.” Even assuming *arguendo* that Hansson ‘838 illustrates “a core surrounded by helical threads”, nowhere does Hannson ‘838 teach Applicant’s “a core surrounded by helical threads, and inclined flanks of said threads bearing continuous micro-patterns increasing exposed surface area of said implant.” Under the Examiner’s interpretation of Hannson ‘838, both of the Applicant’s “inclined flanks of said threads bearing continuous micro-patterns” and “inclined flanks of said threads bearing continuous micro-patterns increasing exposed surface area of said implant” are improperly characterized by Paper No. 20070322 as mere surplusage. This is expressly contrary to current Office policy. As was explained by the United States Court of Appeals for the Federal Circuit, language of the Applicant’s claims may not be summarily ignored.<sup>2</sup> All constituent elements of Applicant’s claims 7 through 10 and 13 through 16 must be demonstrated to actually exist in the art as of the time of Applicant’s invention;

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<sup>2</sup> *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc. and Mattel, Inc.*, No. 06-1402, page 10 (CAFC 9<sup>th</sup> of May 2007).

substitution of the Examiner's paraphrase of Applicant's claim language<sup>3</sup> is inadequate under the *the invention* requirement for anticipation established by the U.S. Congress in the several paragraphs of 35 U.S.C. §102. Consequently, absent Applicant's structure of "inclined flanks of said threads bearing continuous micro-patterns" and "inclined flanks of said threads bearing continuous micro-patterns increasing exposed surface area of said implant", there is no demonstration of anticipation. Even assuming *arguendo* that the structure of Hannson '838 has some type of "helical threads", the features of that structure are no substitute for Applicant's structure defined by claim 7 and 13.<sup>4</sup> Under 35 U.S.C. §102, these differences<sup>5</sup> illuminate the absence of anticipation. This rejection is therefore inadequate to support a finding of anticipation; its withdrawal is respectfully urged.

**Third**, an element of **common sense** must be attendant to all applications of the art to the "subject matter sought to be patented"<sup>6</sup>; consequently, these differences which were not recognized in the Examiner's comments, serve as convincing indicia of non-obviousness.

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and

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<sup>3</sup> Pages 3, 4 and 5 of the Examiner's comments set forth in Paper No. 5 is a paraphrase of Applicant's claim 1; the Examiner's proposed combination does not actually use this language. As is noted in this paper, Claim 1 does not teach the relations between claim 1's constituent elements.

<sup>4</sup> Claim 1.

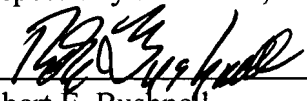
<sup>5</sup> As was recently noted by the Court of Appeals, "a *signal* corresponding to a word is not the same as a *signal* corresponding to a letter." *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc. and Mattel, Inc.*, No. 06-1402, page 5 (CAFC 9 May 2007).

<sup>6</sup> *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 2007 WL 1237837, at 12 (30 April 2007). In accord, *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc. and Mattel, Inc.*, No. 06-1402, page 7 (CAFC 9 May 2007).

this application is believed to be in condition to be passed to issue. If there are any questions, the examiner is asked to contact the applicant's attorney.

No fee is incurred by this Amendment. Should there be a deficiency in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,

  
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